WRITING CLEANER/BETTER CODE WITH JAVA 8

PRATHAP

RSA SECURITY, DELL EMC

AGENDA

- History of major Java releases
- Introduction to Lambdas
- Method references
- Iterator pattern
- Comparators in Java 8
- Execute Around Method Pattern
- Useful methods in JDK 8 that can use lambdas
- Working with streams

LAMBDA EXPRESSIONS

- Anonymous functions

- Can be created without belonging to any class

- Can be passed around like an object (data) to methods

- Lazily evaluated

- Syntax involved

THE SYNTAX INVOLVED

- 4 key components of a method declaration:
  - Name
  - Parameter list
  - Body
  - Return value

- Parenthesis is required when there are zero or more than one parameters.

- Specifying type of parameter is optional as it is inferred from the method signature.

- Requires curly braces, if body contains more than one line.

WHERE CAN WE USE LAMBDAS?

- Can be used with functional interfaces.

  - Variable assignment

  - Method parameters

- Used extensively in JDK8

- Limitations on its usage

- Method references

ITERATOR PATTERN

- Types of iterators

- Usage

// code-examples

COMPARATORS

- Why are they used / How often?

- General practice involved

- Simple use case

// code-examples

EXECUTE AROUND METHOD PATTERN

- Useful when a method execution has a pre-op and/or post-op tied to it.

// code-examples

JDK8 METHODS THAT CAN USE LAMBDAS

- Iterable
  - List.forEach(…)
- Collection
  - List.removeIf(…)
- List
  - List.replaceAll(…)
- Collections.sort(list, comparator)
- List.sort(comparator)
- java.util.logger classs
- Collections.max(coll, comparator)

STREAMS IN JAVA

- Overview

- Why is it required?

- Syntax and usage

WORKING WITH STREAMS

- Given a list of students, find the highest score secured amongst the students who graduated in the year 2014

// code-example

REFERENCES

- Design patterns in the light of lambda expressions
  - https://www.youtube.com/watch?v=e4MT_OguDKg
- Refactoring to Java 8
  - https://www.youtube.com/watch?v=NcetKbGayZY
- JavaOne, DevOxx, so on..
- Stack Overflow
- Seeing/Writing more code
- Meetups like these

Q&A

THANK YOU…

Help yourself…

Help others…

We developers also deserve a good time at work ☺